



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/593,306

09/18/2006

Krister Sundberg

HWB-4147-184

7522

23117 7590 04/24/2009
NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

WANG-HURST, KATHY W

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

04/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,306	Applicant(s) SUNDBERG ET AL.	
	Examiner KATHY WANG-HURST	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/13/2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 27-47 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 27 is objected to because claim language is ambiguous. Claim 27 recites "measuring...reporting said first parameter ... and initiating handover to one of said plurality of cells in said second network based on said reported first parameter; ...measuring ...reporting said second measured parameters ... and initiating handover to one of said plurality of cells in said second network based on both of said first and second measured parameters." The term "initiate" is define by Webster's dictionary as "to do the first act; to perform the first rite". The current claim language leads the examiner to have two interpretations. The first is that the first parameter only assists setting up the handover procedure and the actual handover only takes place when both the first and second parameters are considered. The second interpretation is that the first handover takes place based on the first parameter and somehow the first handover

Art Unit: 2617

is not successful, and the second handover is performed based on both first and second parameter after the first handover fails in order to improve the chances of a successful handover. Clarification is required. For examination purposes, the claim is interpreted as measuring and reporting a first parameter and preparing a handover based on the first parameter; and measuring and reporting a second parameter and initiating the handover based on the first and second parameters.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 27-29, 31-37, 39-42, and 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japenga et al. (US 2004/0082328) in view of Chen (US 2003/0207691).

Regarding claim 27, Japenga discloses a method for enabling improved handover of a user equipment (Fig. 1, 150) communicating in a first radio access network utilizing a first radio access technology (RAT), said method comprising: measuring (see e.g. [0007][0028] Fig. 3 item 46), at said user equipment (Fig. 1 item 16), a first parameter for a plurality of neighboring cells of at least a second radio access network utilizing WCDMA ([0007][0028] and Fig. 3 item 46),

Art Unit: 2617

reporting said first parameter ([0007][0028] evaluating first parameter therefore the first parameter must be reported in order to be evaluated) to a node in said first network and initiating handover to one of said plurality of cells in said second network based on said reported first parameter (Fig. 1 showing two different networks);

measuring at least a second parameter ([0008][0029] and Fig. 3 item 52, measuring second parameter) for said plurality of cells of said second network (Fig. 1 multiple cells of said second network); reporting said second measured parameters to said node in said first network ([0008][0029] evaluating first parameter therefore the first parameter must be reported in order to be evaluated); and initiating handover to one of said plurality of cells in said second network based on both of said first and second measured parameters ([0008][0029] camping on a new cell), and wherein both of said first and said second parameter is evaluated simultaneously and said first parameter is reported according to one of a limited range of values ([0020] parameters having minimum values therefore limited range), and said second parameter is evaluated using a limited value range([0023][0024]), whereby each first parameter value is reported together with one of a plurality of possible limited value ranges for said second parameter. (See e.g. [0020][0023][0024]).

Japenga discloses evaluating both first and second parameters at the same time in order to camp on a new cell, but does not explicitly disclose reporting two parameters in the same field in a measurement report message. In an analogous art, Chen teaches reporting several parameters in the same field in a measurement report message (see [0004] having a field containing more than one measurement values).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to report multiple measurements in the same field in a measuring report, as taught by Japenga, thus improving the communication efficiency of the wireless communication system while keeping the current message data structure intact ([0008]).

Regarding claim 37, Japenga discloses a user equipment (Fig. 1 item 16) adapted for communicating with a first radio access network utilizing a first radio access technology or a second radio access network utilizing WCDMA ([0005]-[0008]), said user equipment performing measurements of at least one cell in the second network in order to determine a suitable handover cell while communicating over said first radio access network ([0005]-[0008]), said user equipment comprising: means for measuring a first parameter and means for reporting said parameter to the first radio network ([0007][0028]); means for measuring a second parameter ([0008][0029]), and means for reporting both said measured first and second parameters simultaneously to a node in said first radio access network, wherein said means are configured for reporting said first parameter according to one of a limited range of values (see e.g. [0020][0023][0024]), and for reporting said second parameter using a limited value range ([0020][0023][0024]), whereby each first parameter value is reported together with one of a plurality of possible limited value ranges for said second parameter (e.g. [0020][0023][0024]).

Japenga discloses evaluating both first and second parameters at the same time in order to camp on a new cell, but does not explicitly disclose reporting two parameters

Art Unit: 2617

in the same field in a measurement report message. In an analogous art, Chen teaches reporting several parameters in the same field in a measurement report message (see [0004] having a field containing more than one measurement values).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to report multiple measurements in the same field in a measuring report, as taught by Japenga, thus improving the communication efficiency of the wireless communication system while keeping the current message data structure intact ([0008]).

Regarding claim 42, Japenga discloses a network node in a first radio access network (Fig. 1), utilizing a first radio access technology, capable of communicating with a user equipment and receiving measurements of neighboring cells of a second radio access network utilizing WCDMA from the user equipment (Abstract and Fig. 1), the node comprising: means for simultaneously receiving measured first and second parameters of the second radio access network from the user equipment ([0028][0029]), wherein said receiving means are configured for receiving said first parameter according to one of a limited range of values (see e.g. [0020][0023][0024]), and for receiving said second parameter, using a limited value range (e.g. [0020][0023][0024]), whereby each first parameter value is received together with one of a plurality of possible limited value ranges for said second parameter (e.g. [0020][0023][0024]), and means for selecting a target cell of said neighboring cells of said second network for handover based on said received first and second parameters ([0031]).

Japenga discloses evaluating both first and second parameters at the same time in order to camp on a new cell, but does not explicitly disclose reporting two parameters in the same field in a measurement report message. In an analogous art, Chen teaches reporting several parameters in the same field in a measurement report message (see [0004] having a field containing more than one measurement values).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to report multiple measurements in the same field in a measuring report, as taught by Japenga, thus improving the communication efficiency of the wireless communication system while keeping the current message data structure intact ([0008]).

Regarding claims 28-29, Japenga discloses the method according to claim 27, wherein said first radio access network comprises one of GSM, WLAN and CDMA2000 (see e.g. Abstract and Fig. 1).

Regarding claims 31-32, 39, 44, Japenga discloses the method according to claim 27, wherein said first parameter comprises information regarding the quality of the received signal at the user equipment, and said first parameter representing the chip energy divided by noise, E_c/N_o ([0007][0020]).

Regarding claims 33-34, 40, 45, Japenga discloses the method according to claim 27, wherein said second parameter comprises information regarding the signal strength of the received signal at the user equipment, and said second parameter represents the Received Signal Code Power (RSCP) ([0008][0022]).

Regarding claims 35-36, Japenga discloses the method according to claim 27, further comprising initiating handover to said second network based on optimizing a predetermined function depending on said first and second parameter (see e.g. [0024][0027]).

Regarding claim 41, Japenga discloses the user equipment according to claim 37, wherein said first parameter is the E_c/N_o ([0007][0020]), and said second parameter is the RSCP ([0008][0022]).

Regarding claim 46, Japenga discloses the network node according to claim 42, wherein said received first and second parameters are the Received Signal Code Power (RSCP) ([0007][0020]) and/or the chip energy divided by noise, E_c/N_o ([0008][0022]).

Regarding claim 47, Japenga discloses the network node according to claim 42, wherein said node comprises a base station controller ([0016]).

5. Claims 30, 38 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japenga in view of Chen, further in view 3GPP Technical Specification 25.215 v.3.1.0, published in December 1999, hereafter referred to as TS.

Regarding claim 30, 38 and 43, Japenga in view of Chen discloses measuring two parameters with limited range but fails to teach the ranges that the two parameters fall under. TS teaches said first parameter ranges $[-24, \dots, 0]$ dB (section 5.1.7), and said second parameter ranges $[-115, \dots, -25]$ dBm (section 5.1.1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to include the ranges taught in TS into parameters disclosed by Japenga in order improve efficiency of cell reselection process.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Korpela et al. (US 2004/0022217) discloses a method and apparatus for soft handover area detection.

Hunkeler (US 2004/0008647) discloses a method and system for automated determination of inter-system border thresholds.

Kim et al. (US 2003/0218995) discloses a method for handling inter-RAT measurement and report a dual-mode user equipment.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHY WANG-HURST whose telephone number is (571) 270-5371. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, alternate Fridays, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KATHY WANG-HURST/
Examiner, Art Unit 2617